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Experiencing SARS: Perspectives of the Elderly Residents and Health Care Professionals in a Hong Kong Nursing Home

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Severe acute respiratory syndrome (SARS) has affected many areas of the world recently and is becoming a global problem. Hong Kong and China have been most severely affected by this new infectious disease. The elderly population is highly vulnerable, and mortality in those older than 65 years is more than 50%. In our study, 27 health care workers and 40 elderly residents in a nursing home were interviewed to investigate their level of knowledge of SARS and its prevention. Most of the elderly residents knew little regarding SARS and prevention strategies, despite access to outside news by TV, radio, and visitors. Also, the worry and fear of an outbreak of SARS among staff working in the nursing home was considered to be high. Tailored education programs to promote awareness and prevention of SARS for the elderly are needed. Also, more in-service training, support, and counseling are strongly indicated for staff to promote disease prevention and improve quality of care. (Geriatr Nurs 2003;24:266-9)

There has recently been an outbreak of severe acute respiratory syndrome (SARS) worldwide, with China and Hong Kong being the worst affected. The World Health Organization issued a global alert about the outbreak of SARS and instituted worldwide surveillance on March 13, 2003.[1] SARS is an acute respiratory infection that is caused by a new member of the coronavirus family. The main symptoms include fever of 38° C, malaise, chills, headache, and muscle pain. Chest X-rays show changes compatible with pneumonia. Other symptoms include coughing, diarrhea, and shortness of breath or difficulty in breathing. The incubation period is typically 2 to 7 days but can be as long as 10 days.[2]

There were 1750 reported SARS cases in Hong Kong at the time of this writing (June 7, 2003). Among those affected, 1350 (77%) had recovered and been discharged from hospital. The total number of fatal cases to date is 286.[3] Figure 1 shows the age-gender specific incidence of SARS. While SARS is by no means a disease of the elderly alone, a large number of cases are in the elderly, and men 75 or older show the highest incidence rate (10%).[3] Furthermore, the patient's age was strongly associated with SARS-related mortality, regardless of the time between onset of symptoms and admission to hospital.[4] SARS is lethal for the elderly. Mortality for patients younger than 60 stands at 6.8%, but this increases dramatically to 55% for patients more than 60.[4]

There are about 50,000 elderly persons living in 741 nursing homes in Hong Kong.[5] In 54 of these nursing homes (7.2%) a resident has contracted SARS. In addition, 11 staff members working in nursing homes have contracted SARS; two have died.[5]

With this in mind, the overall objective of this study was to explore the knowledge and understanding of SARS in the elderly and to elicit the prevention and precautionary measures taken by the elderly and by nursing homes to keep the disease under control and lessen the death toll of the elderly in particular.

METHODS

This was a descriptive qualitative study. After gaining approval from the ethics committee of the university, residents and staff in a local nursing home were approached and invited to participate in the study. Verbal consent was

obtained from all participants. Inclusion criteria for the residents included being 60 or older, having resided in the nursing home for at least 3 months, and being cognitively intact based on Abbreviated Mental Test (Modified score of = 8).[6] In terms of the staff, the inclusion criteria included being older than 21 and having worked in the nursing home for at least 3 months. Data were collected from May 26 to June 6, 2003. The response rate was 24.5% (40 of a total of 163) and 40% (27 out of a total of 68) in residents and staff, respectively.

Residents were interviewed and asked to answer questions regarding their health status, knowledge of SARS, worries about contracting SARS, and knowledge on SARS prevention (Table 1). Staff were interviewed and invited to answer questions regarding their worries and fears about contracting SARS, the possibility of a SARS outbreak in their working area, and the precautionary measures that had been taken to control SARS (Table 2).

DATA ANALYSIS

Interviews were taped and transcribed. All statements, phrases and sentences related to the same content were clustered by themes. The themes were modified until all statements, phrases, and sentences had been organized. Finally, the themes were further condensed into categories for comparison and discussion.

FINDINGS

SARS: The elderly perspective

There were 40 elderly (33 female and 7 male) residents who took part in this study. Their ages ranged from 65 to 82 years; median age was 75. The majority (93%) of the participants had stayed in the nursing home for 3 years or more. Their major underlying medical problems included hypertension (37.5%), diabetes mellitus (35%), history of stroke (30%), heart disease (37.5%), cataract (35%), and musculoskeletal problems (67.5%). Half of the participants had not received any formal education but were able to read, write, and understand Chinese; 40% of the participants had primary education, 7.5% had received secondary education, and 2.5% had received tertiary education. Regarding occupation in the past, more than 50% of the participants were housewives, whereas others were mainly engaged in manufacturing and serving industries, including tailoring, textile, carpentry, butcher, chef, and market stall holder or street seller.

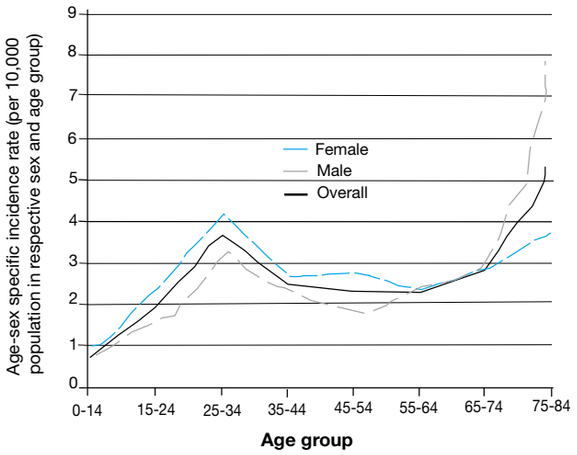
In terms of knowledge of SARS, the questions were:

1. What is SARS? (Answer: It is a new type of pneumonia, also known as atypical pneumonia.)
2. What are the signs and symptoms of SARS (Answer: Fever and coughing are the most common symptoms of SARS.)
3. How is SARS spread? (Answer: It is infectious and is known to be transmitted by droplets, sneezing and spitting, and close personal contact.)

Answers of participants were categorized into good knowledge, little knowledge, and no knowledge about SARS, based on the number of correct responses. Among the 40 elderly residents who took part in this study, only 7 (17.5%) had what was categorized as good knowledge about SARS, whereas 16 (40%) had little knowledge, and 17 (42.5%) knew virtually nothing of SARS. Around half of those whose knowledge was good worried about contracting SARS themselves compared with 66% of those with moderate knowledge about SARS. In the least knowledgeable group, only 10% of the participants showed worries over SARS. These results are shown in Figure 2.

In terms of SARS prevention, participants were questioned on the importance of wearing a surgical mask when going out, frequent handwashing with soapy water and washing hands before touching eyes and ears, maintaining good personal hygiene, eating well, avoiding crowded

Figure 1. The age-gender specific incidence of SARS cases in Hong Kong



Health, Welfare and Food Bureau SARS Bulletin, 7 June 2003

Figure 2. Elderly residents' perspective on SARS

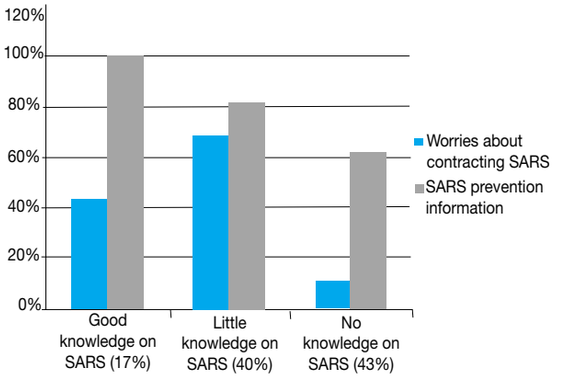
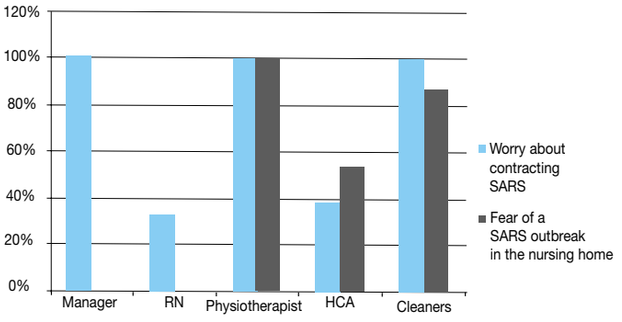


Figure 3. Staff concerns about SARS



areas, and avoiding touching items in public areas, such as the elevator button. Participants with good knowledge on SARS also had good knowledge on prevention. They were able to name all of the above precautions. Those with little knowledge on SARS were able to name 1 or 2 preventive measures, and the majority of those with no knowledge on SARS were able to name only 1.

SARS: The staff perspective

There were 27 staff members (3 men and 24 women) who took part in the study; 2 were managers, 1 was a physiotherapist, 3 were registered nurses, 12 were health care assistants, and 9 were domestic staff. Their ages ranged from 20 to 60 years, with a median age of 45. The majority of staff had worked in the nursing home for at least 1 year. No incidence of SARS had been reported in this particular nursing home; however, 3 residents who had experienced fever recently had been taken to the hospital for further investigation and treatment. They were then confirmed to have health problems other than SARS.

Results concerning the worries of staff regarding the contraction of SARS at work and fear of an outbreak of SARS in the nursing home are shown in Figure 3. The manager, physiotherapist, and domestic staff all stated that they were worried about contracting SARS at work. The majority of the staff expressed that residents in the nursing home were elderly with chronic illness and likely to have a poor immune system, predisposing them to infectious disease, including SARS. In light of the possibility of an outbreak, the physiotherapist, the majority of the domestic staff, and the health care assistants stated they felt fear and concern. They expressed their concerns about visitors bringing the SARS virus into the nursing home. In contrast, the manager and registered nurses were not worried about an outbreak because they recognized that conditions and hygiene in procedures in the nursing home environment were satisfactory and believed these to be less risky compared with the environment in a general hospital.

To strengthen precautionary measures to control the spread of SARS within the nursing home, nurses from Hong Kong Hospital Authority and outreach nurses were invited to give a health talk to residents and staff on knowledge and prevention of SARS. Protective materials including surgical masks, gloves, face and eye shields, protective clothing, and caps were provided for the use of staff. Disinfection agents for handwashing and cleaning also were provided. An escorted staff stayed with hospital residents for follow-up appointments and medical attention. The escorted staff wore protective clothing and, before returning to work at the nursing home, they washed carefully and changed their clothing. Also, when residents returned from the hospital after a follow-up appointment or on discharge from the hospital after medical treatment, they stayed in an isolated room in the nursing home for 14 days. The resident under confinement had to wear a facemask and activities were restricted in the isolated room. Staff had to use strict isolation techniques in handling the isolated residents, including wearing a protective gown, gloves, and surgical mask.

A further measure adopted was that letters were sent to all visitors regarding the outbreak of SARS, urging them to refrain from visiting the nursing home if they experienced any of the signs and symptoms. To reduce the number of visitors, the visiting hours were shortened to 6 hours per day. All visitors were required to wear surgical masks during their visits and to use disinfectants to clean their hands when they arrived at the nursing home.

DISCUSSION

SARS is a new disease—one to which the elderly are particularly susceptible. The mortality rate in those older than 65 years of age is very high. Knowledge of the disease and how to prevent it is crucial to keeping our elderly SARS free and to allay their concerns and fears about this disease.

The 40 nursing home residents who participated in this study were mentally alert, were able to read, and had access to televisions and radios to catch up with the latest news and current affairs in the outside world. In addition, health education regarding SARS and the importance of good personal hygiene in limiting the spread of SARS had been provided to residents via various sources and means, such as nurses giving health talks and pamphlets given to residents and relatives. To our surprise, however, very few of the participants in the nursing home could be described as knowledgeable regarding SARS and its prevention. Some of these residents were worried about contracting the disease themselves. However, the majority of the residents studied had either little or no knowledge about SARS. Not surprisingly perhaps, those with the least knowledge also had the least concerns about contracting the disease. The lack of knowledge and concern may make them more vulnerable in terms of contracting SARS. It is normal and justifiable to have concerns about contracting a potentially fatal disease, and these concerns can be useful to drive the implementation of precautionary measures

Table 1. Questions for residents in the nursing home

1. Could you tell me all the things you know about SARS?
2. Do you worry about contracting SARS yourself?
3. Do you know how to prevent SARS?

Table 2. Questions for staff working in the nursing home

1. How long have you been working here?
2. Do you worry about contracting SARS while working here?
3. Are there any cases of SARS in this nursing home?
4. As the mortality rate of SARS for the elderly is so high, do you fear of an outbreak here?
5. What has been done to control the spread of SARS here?

that require active cooperation and participation of individuals. Care must be taken, however, to ensure that justifiable and constructive concerns must not be allowed to become destructive fears. The results of this study indicate that more tailored health education specifically targeted to inform and allay the fears of the elderly in the nursing home would be useful.

The majority of staff worried about contracting SARS at work and was concerned about an outbreak in the nursing home. These worries were caused largely by a tragic large-scale outbreak in a housing estate triggered by a single visitor with SARS and accounted for more than 300 SARS cases and more than 30 deaths. In addition, staff were very much aware that several medical staff and a health care assistant in a nursing home had died recently of SARS in Hong Kong.

To minimize the risk of an outbreak, the nursing home proactively implemented preventive measures including sending letters to visitors and shortening the visiting period. To further alleviate the worry and fear of the staff, especially the health care assistants and domestic staff, in-service workshops and seminars are indicated, and more channels for communication and support to all staff are recommended.

The SARS outbreak in Hong Kong has abated, and there have been very few new cases since June 1, 2003. Nonetheless, vigilance must be maintained, especially in the care of high-risk elderly subjects. All citizens, the elderly in particular, must continue to practice general preventive measures and guard against lapses in personal and environmental hygiene. Awareness of SARS should remain high because this disease is likely to remain a threat worldwide for some time to come. Our experience in Hong Kong shows SARS to be highly infectious and that infection in an elderly person is often fatal. Increasing awareness of SARS in the elderly and their caregivers and enhancing preventive measures are crucial to avoid new outbreaks. The worry and fear of an outbreak of SARS among staff working in the nursing home are still high. More in-service training, support, and counseling are strongly indicated to promote prevention and improve quality of care. Tailored education for the residents of elderly care homes is also important because their active participation is needed in SARS prevention, and their fears and concerns of SARS, while often justified and possibly useful, must not be allowed to compromise their quality of life.

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This work was financially supported by the Departmental General Research Grant Project account code G=T796 of the Hong Kong Polytechnic University.

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0197-4572/2003 $30.00 + 0
doi:10.1067/mgn.2003.82